

VOLPYANSKIY, Lev Markovich; DUGINA, M.A., tekhn.red.

[Casting in shell molds] Lit'e v obolochkovye formy. Moskva,  
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 66 p.  
(Nauchno-populiarnaya biblioteka rabochego-liteishchika, no.9)  
(MIRA 14:3)

(Shell molding (Founding))

VOLPYANSKIY, S.Ya.

GIROVSKIY, V.F., nauchnyy rabotnik; KANTORER, S.B., nauchnyy rabotnik; SHASS, M. Ye., nauchnyy rabotnik; D'YAKOVA, M.V., nauchnyy rabotnik; BABENKO, A.P.; VOLPYANSKIY, S.Ya.; MERZLYAK, G.H.

[Socialist competition for cost reduction in construction work] Sotsialisticheskoe sorevnovanie za snizhenie stoimosti stroitel'nykh rabot. [Avtorskii kollektiv: V.F.Girovskii i dr.] Moskva, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 55 p. (MLRA 6:7)

1. Moszhilstroy trest (for Babenko, Volpyanskiy, Merzlyak). 2. Kafedra Organizatsii i planirovaniya stroitel'nogo proizvodstva MIEI imeni S.Ordzhonikidze. 3. Moskovskiy inzhenerno-ekonomicheskii institut imeni S.Ordzhonikidze (for Girovskiy, Kantorer, Shass, and D'yakova). (Construction industry--Costs)

VOL-RABINOVICH, L., inzh.

Polystyrol adhesive. Mast.prom.1 khud.promys. 3 no.12:30 D '62.  
(MIRA 16:2)

1. TSentral'naya laboratoriya upravleniya khimicheskoy  
promyshlennosti Moskovskogo gorodskogo ispolnitel'nogo komiteta  
Moskovskogo gorodskogo soveta deputatov trudyashchikhaya.  
(Styrene polymers)

L 18955-63

EPR/EWP(j)/EPF(c)/EWT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4

RM/WW/MAY

ACCESSION NR: AP3006543

S/0191/63/000/009/0053/0055

AUTHOR: Vol-Rabinovich, L. L.

TITLE: Polymerizable adhesive for polystyrene plastics<sup>15</sup>

SOURCE: Plasticheskiye massy\*, no. 9, 1963, 53-55

TOPIC TAGS: polystyrene, plastics, PK adhesive

ABSTRACT: A/polymerizable adhesive for polystyrene plastics was developed based on PK<sup>1</sup>resin, a solution of hard polystyrene in styrene monomer. The adhesive is non-toxic, can be made in different viscosities by varying amount of polystyrene in monomer, and can be used with advantage over solvent adhesives such as dichlorethane. "The toxicological test was carried out under the supervision and by the immediate division of G. Ya. Kel'man." Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 30Sep63

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 001

Card 1/1

VOLRAT, A. [Volrate, A.]

Intestinal viruses carrier state in healthy children before and after vaccination with live poliomyelitis vaccine. Vestis Latv ak no.4:139-144 '62.

1. Institut mikrobiologii AN Latvyskoy SSR.

VOLRAT, A. [Volrate, A.]

Occurrence of enteroviruses in healthy children. Vestis Latv ak  
no.3:97-102 '61.

1. Institut mikrobiologii AN Latvyskoy SSR.

\*

KUKAYN, R. [Kukaine, R.]; INDULEN, M. [Indulēna, M.]; KANEL', I. [Kanele, I.];  
KONDRASHOVA, M.; KALNINYA, B. [Kalnina, V.]; VOLRAT, A. [Volrate, A.];  
FELDMAN, G. [Feldmane, G.]; NAGAYEVA, L.; PAVLOVA, M.; POPOVA, V.

Characteristics of the tuberculin tests in children inoculated  
during early infancy with peroral BCG vaccine and live poliomyelitis  
vaccine. Vestis Latv ak no.7:115-117 '62.

1. Institut mikrobiologii AN Latvyskoy SSR.

L 31205-66 EWT(1)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6022603

SOURCE CODE: CZ/0032/65/015/012/0938/0942

AUTHOR: Volenik, K.; Vlasakova, L.; Volrabova, H.; Lastovkova, O.

37  
B

ORG: State Research Institute for the Economic Use of Material, Prague (Statni vyzkumny ustav ochrany materialu)

TITLE: Determining the actual surface area of metal samples from krypton adsorption

SOURCE: Strojirenstvi, v. 15, no. 12, 1965, 938-942

TOPIC TAGS: metal surface, krypton, gas adsorption, chemical laboratory apparatus

ABSTRACT: The article describes a method of measuring the actual surface area of metal samples by calculating it from the adsorption of krypton and also the laboratory equipment required for its application. Although the method is quite accurate and is practically the only one which can be used by plants, it has disadvantages, as the measurements take much time and the equipment is rather sophisticated. This paper was presented by Engineer M. Roubal. Orig. art. has: 8 figures and 1 table. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 11, 07 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001  
OTH REF: 004

Card 1/1 BLG

UDC: 531.7.621.787: 546.294

0915

OC 221



18 8300

30593  
Z/032/61/011/011/002/007  
E112/E555

AUTHORS: Vlasáková, L., Volrábová, H. and Veleník, K.

TITLE: Initial stages of steel corrosion at elevated temperatures

PERIODICAL: Strojirenství, v.11, no.11, 1961, 843-847

TEXT: The present paper is based on the theory of Cabrera and Mott (Ref.1: Rep.Progr. in Phys. 12, p.165) which proposes that for each metal and set of conditions there is a critical temperature at which a transition between two types of corrosion mechanisms can be observed. Above the critical temperature, the main factor affecting corrosion is diffusion of metal cations to the surface of the metal. The rate of oxidation can be expressed by the parabolic law:

$$x^2 = kt + a, \quad (1)$$

where  $x$  - thickness of layer,  $t$  - time, and  $k$  and  $a$  are constants. Therefore, a corrosion process which obeys the parabolic law will proceed without reaching a maximum and the layer thickness will increase with time. On the other hand, the corrosion mechanism below the critical temperature is determined by an

Card 1/5

30593

Initial stages of steel corrosion ... Z/032/61/011/011/002/005  
E112/E535

electric double layer and is characterized by a fairly rapid initial growth of the layer, soon reaching a maximum limiting thickness. The limiting thickness is an inverse function of absolute temperature  $T$ , and can be represented graphically as a straight line, intersecting the abscissa at the critical temperature  $T_k$ . Determination of limiting thickness at various temperatures and extrapolation of the plots of inverse thickness against  $T$  will produce the critical temperature  $T_k$  at which the growth of the corrosion layer, affected merely by the electric double layer, will reach its maximum. Beyond the critical temperature corrosion will proceed by the ionic diffusion mechanism, without ever reaching a maximum. Therefore, determination of the critical temperature is based on an accurate measurement of the layer thickness at different temperatures and atmospheric conditions. A novel optical method is now described which permits the determination of layer thickness within an accuracy of a few  $\text{\AA}$ . It is based on previous work of A. Vařicek (Ref. 4: Čs. Čas. fys., 4, p. 74) dealing with changes of the ellipticity of polarized light on being reflected from the surface of the studied objects. The layer thickness is computed from changes of ellipticity and the refractive indices

Card 2/5

30593

Initial stages of steel corrosion ... Z/032/61/011/011/002/005  
E112/E535

of the metal and its oxide. The thickness of corrosion layers at the initial stages of corrosion at relatively low temperatures ranges from a few tens to a few hundreds of Å, and conventional methods have been found inadequate to measure the course of oxidation. The optical method permits following the growth of the corrosion layers with great accuracy from a knowledge of the optical constants of the material and ellipticity changes of polarized light. On the basis of the test results the critical temperatures of steels with varying amounts of B are tabulated. They range from 217°C for the Czech constructional steel 13 030 to 277°C for steels with very high (10%) B contents. Furthermore, the thickness of layers are plotted against corrosion times at different temperatures for seven different types of steel (Abscissa - time of oxidation, in hours; axis 4 thickness of layer, d, in Å). The new method permits examining the corrosion resistance of steel constructional materials in 60-80 hours, whereas conventional procedures require 500 to 1000 hours and produce only subjective evaluations. The method is recommended by the authors as a standard test. There are 11 figures, 2 tables and 6 references:

Card 3/5

Initial stages of steel corrosion ... <sup>30593</sup> Z/032/61/011/011/002/005  
E112/E535

4 Soviet-bloc and 2 non-Soviet-bloc. The English-language references read as follows: Ref.1 (quoted in test), Ref.6: Vernon, W.H.J., Calnan, E.A., Clews, C.J.B., Nurse, T.J., 1953, Proc.Roy. Soc.(A) 216, p.375.

ASSOCIATION: Státní výzkumný ústav ochrany materiálu, Praha  
(State Research Institute for the Protection of Materials, Prague)

Fig.7.  
(With  
0.35% B)

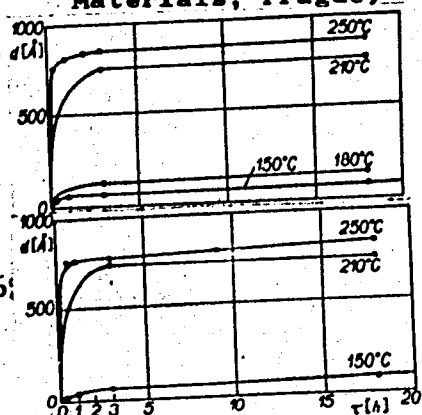
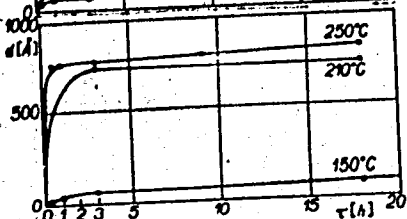


Fig.8.  
(With 0.76%  
B)



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Fig.9  
(With  
6% B)

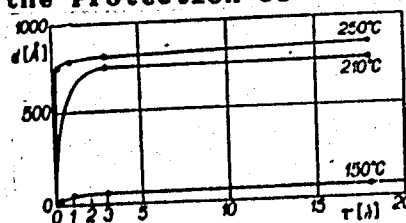
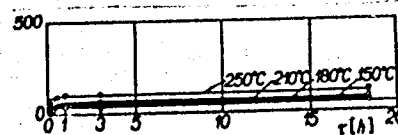


Fig.10  
(With  
10% B)



Initial stages of steel corrosion ...

30523  
Z/032/61/011/011/002/005  
E112/E535

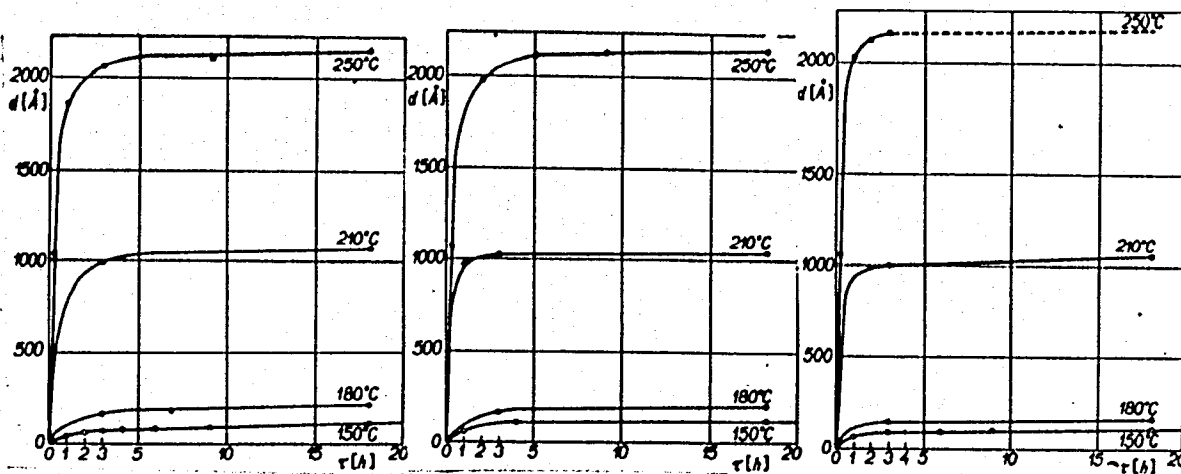


Fig. 3. Steel 13 030. Fig. 4. Steel 12 022 Fig. 5. Steel 15 110

Card 5/5

VOLRAT, A.[Volrate, A.] (Riga)

Occurrence of enteroviruses in healthy children. Vestis Latv ak  
no.3:97-102 '61. (KEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut mikrobiologii.

(Viruses) (Children in Latvia)

VOLRATE, A. (Riga)

Finding intestinal viruses in healthy children. Report I. (To be continued) Vestis Latv ak no.4:155-158 '60. (EEAI 10:7)

1. Latvijas PSR Zinatnu akademijs, Mikrobiologijas instituts.  
(VIRUSES) (INTESTINES) (CHILDREN)

DAYON, M.I.; VOLYNSKIY, V.Kh.

Measurement of momenta of fast charged particles and investigation of nuclear reactions with energies in the range of

$10^{-10}$  to  $10^{-12}$  eV. Zhur.eksp.i teor.fiz. 37 no.4:906-909  
'59. (MIRA 13:5)

1. Fizicheskiy institut imeni P.N.Lobedeva Akademii nauk  
SSSR.

(Particles (Nuclear physics))  
(Nuclear reactions)



TITLE AND SUBJECT		PROCESSING AND PROPERTIES INDEX	
VOL-RABINOVICH, L.		B-I - 10	
<p>Ethyl alcohol from wood waste. L. Vol-RABINOVICH (Leningrad, Proc., 1933, 2, No. 8, 19-22).—Increase in pressure up to 7.5 atm. and rise of temp. up to a certain limit increases fermentation of some of the monosaccharides. The optimum amount of <math>H_2SO_4</math> was 3.7-4.3% of the dry mass. The introduction of catalysts (e.g., phosphates) for the biochemical process raised the <math>EtOH</math> yield, which was 18-19 liters per 100 kg. of dry mass. Ch. Ann. (r)</p>			
<p>ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>COMMON SYMBOLS</p>		<p>COMMON SYMBOLS</p>	
<p>COMMON SYMBOLS</p>		<p>COMMON SYMBOLS</p>	

1ST AND 2ND CIPHERS																										3RD AND 4TH CIPHERS																									
PROCESSES AND PROPERTIES INDEX																										METALLURGICAL LITERATURE CLASSIFICATION																									
<p>ethyl alcohol from wood waste. L. Vol-Rabunovich. <i>Leokhimicheskaya Prom.</i> 2, No. 5, 10-32 (1931).—Increase in the pressure during the hydrolysis up to 7.5 atm. and in the temp. up to a certain limit favors the fermentation of some of the monosaccharides, accelerating the decomposition of pentoses and other reducing substances formed in the hydrolysis, which decompose with greater ease at elevated temp. than the dextrose. The amt. of the catalyst (in this case dil. <math>H_2SO_4</math>), is the basic factor, while the acidity of the soln. is of a minor influence on the yield of saccharides. Best results are obtained with a <math>H_2SO_4</math> concn. of 2.7 to 5.2% of the dry fiber. The introduction of additional catalysts which favor the biochemical process, such as phosphates, raises the yield of <math>C_6H_{12}O_6</math> from 7.5 to 10.11 l. per 100 kg. of dry fiber. The step-wise hydrolysis of the fiber causes a more complete action, raising the yield of saccharides to 44.6% of the wt. of the dry fiber; 30% of the saccharides is useful for fermentation, and this permits a yield of <math>C_6H_{12}O_6</math> (95%) to 18-19 l. per 100 kg. of dry fiber. A. A. Bochtlingk</p>																										<p>22</p>																									
																										<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

LO0826-66 EWT(1)/EWG(v)/FCC/EEC-L/EWA(h) GW

ACCESSION NR: AP5020685

UR/0033/65/042/004/0859/0861  
523.745

AUTHOR: Vol'shakova, O. V.

TITLE: Intensity variations of the solar wind with the solar activity phase cycle,  
from data of stable magnetic field variations

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 4, 1965, 859-861

TOPIC TAGS: solar wind, magnetic field, solar activity

ABSTRACT: The seasonal changes in the pc4 amplitude were investigated so that the changes in the solar wind intensity as a function of the solar activity phase cycle could be estimated. The data covered a time interval of 8 years--from 1957 to 1964. This corresponds to intervals of high, medium, and low activity. It is shown that the mean amplitude of the type pc4 short-period variations of the earth's magnetic field corresponding to the solar wind during the quiet period (Kp = 0) remains constant throughout the 8 years of observation. It is concluded that the intensity of the solar wind from undisturbed solar regions does not change with the solar activity phase cycle. Orig. art. has: 1 figure.

Card 1/2

LC0826-66

ACCESSION NR: AP5020685

ASSOCIATION: Geofizicheskaya stantsiya, Borok Instituta fiziki Zemli, Akademii nauk  
SSSR (Borok Geophysical Station, Institute of Terrestrial Physics, Academy of  
Sciences, SSSR) 44.55

SUBMITTED: 29Mar65

ENCL: 00

SUB CODE: AA

NO REF SOV: 001

OTHER: 001

*mlb*  
Card 2/2

L 9959-65 ENT(m)/LPR/T/EMP(b) . Ps-4 ASD(a)-3/RAEM(t) JD/MLK  
 ACCESSION NR: AT4046863 8/0000/64/000/000/0328/0330

AUTHOR: Panin, V. Ye., Dudarev, Ye. F., Vol'shanina, M. A.

TITLE: Suzuki atmospheres and their importance in hardening of alloys

SOURCE: AN SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964

TOPIC TAGS: Suzuki atmosphere, metal strength, metal crystal, crystal structure, alpha solution, alloy hardening, <sup>27</sup>zopper <sup>27</sup>aluminum alloy, <sup>27</sup>copper <sup>27</sup>zinc alloy, defect energy

ABSTRACT: It is well known that one of the factors contributing to the hardening of alloys in the alpha solid solution are the Suzuki atmospheres occurring in the defects of tensile dislocations. This lowers the dislocation mobility and increases the yield point. Since the Suzuki atmospheres vary slightly with temperature, they are very important at high temperatures. Several articles (H. Suzuki, P. A. Flinn) have dealt with Suzuki atmospheres. However, even the latest article by Suzuki does not define the relationship between the defect energy and Suzuki atmosphere concentration. The present article shows this relationship based on the latest publication by Suzuki for alloys with low defect energy. On the basis of phase equilibrium equations, the author evolves numerical equations for Cu-Al and Cu-Zn alloys with low defect energy. Fig. 1 of the Enclosure shows the concentration

Card 1/4

L 9959-65

ACCESSION NR: AT4046863

for Cu-Zn alloys, while Fig. 2 shows the same for Cu-Al alloys. In previous publications it has been incorrectly suggested that the importance of Suzuki atmospheres increases as the solid solution concentration increases. Solid solutions disintegrate after low temperature annealing following deformation. An equation is evolved showing that the hardening depends on the defect energy for the given alloy. Precise calculations cannot as yet be made since several factors are still unknown, e.g. the defect energy with a Suzuki atmosphere. However, for small Suzuki atmospheres, the values may be found. For Cu + 38 at. % Zn the contribution of the Suzuki atmosphere in hardening does not exceed  $1.5 \text{ kg/mm}^2$ . In conclusion, it is suggested that empirical curves of hardening should be constructed. Orig. art. has: 2 figures and 14 equations.

ASSOCIATION: none

SUBMITTED: 16Jun64

ENCL: 02

SUB CODE: MM

NO REF SOV: 004

OTHER: 005

Card

2/4

L 9959-65

ACCESSION NR: AT4046863

ENCLOSURE: 01

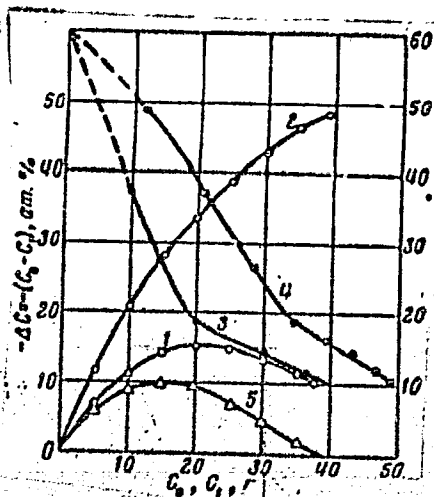


Fig. 1. Concentration relationships of  $\Delta C, C_1, \gamma(C_0), \gamma(C_1)$  for Cu-Zn alloys ( $T=293K$ );

$$1 - (-\Delta C) = -(C_0 - C_1) = f(C_0); \quad 2 - C_1 = \gamma(C_0); \\ 3 - \gamma = \gamma(C_0); \quad 4 - \gamma = \gamma(C_1); \quad 5 - (-\Delta C) = f(C_0)$$

Card 3/4

L 9959-65

ACCESSION NR: AT4046863

ENCLOSURE: 02

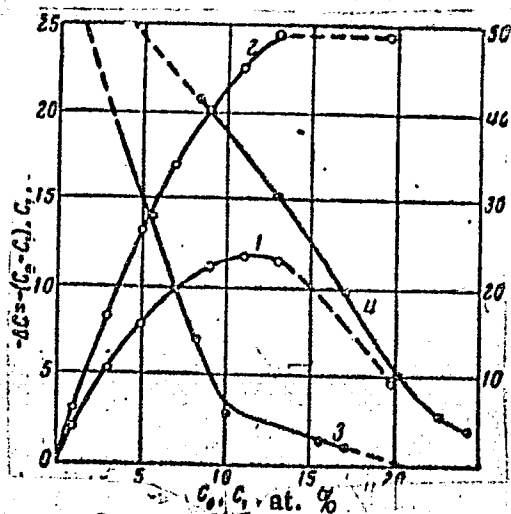


Fig. 2. Concentration relationships of  $\delta C$ ,  $C_1$ ,  $\gamma(C_0)$ ,  $\gamma(C_1)$  for Cu-Al alloys (Curves numbered as in Fig. 1.)

4/4

Card



ALEKSANDROV, I.A.; SHEYNMAN, V.I.; KOGAN, Yu.S.; SHVETS, Ye.M.;  
Prinimali uchastiye: VCI'SHANCK, Yu.Z.; LIZUNKOV, V.P.;  
SEREGINA, A.P.; KAZAKOVA, L.I.; MUSATOVA, Z.D.

Hydrodynamics of plates made of S-shaped elements. Khim.  
i tekhn. topl. i masel 6 no. 7: 38-44 J1 '61. (MIRA 14:6)

1. Giproneftemash.  
(Plate towers)

YERTMAN, G.I.; VOL'SHANSKIY, M.I.

Production of feeds enriched with vitamin B<sub>12</sub> from distilling  
wash (survey). Spirt.prom. 26 no.1:34-35 '60.

(MIRA 13:6)

(Distilling industries--By-products)  
(Feeding and feeds)

FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Fermenting action of fungal amylase on starch (from "Die Branntween-  
wirtschaft," no.23, 1959). Spirt.prom. 26 no.6:45 '60.

(MIRA 13:11)

(Amylase)

(Starch)

FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Using grain and potato residual wash as a culture  
medium for microorganisms producing vitamin B<sub>12</sub>. Spirt.  
Spirt.prom. 26 no.4:34-37 '60. (MIRA 13:8)  
(Cyanocobalamin)  
(Bacteriology--Cultures and culture media)

VOL'SHANSKIY, M. I.; KOPYLOVA, A.M.

Out session of the Scientific Council of the Central  
Scientific Research Institute of the Alcohol and the  
Liqueur and Vodka Industries. Spirt.prom. 26 no.4:  
44-45 '60. (MIRA 13:8)  
(Distilling industries—Congresses)

VOL'SHANSKIY, M.I.; KOPYLOVA, A.M.

All-Union Seminar on new types of production. Spirt.  
prom. 26 no.5:46 '60. (MIRA 13:7)  
(Distilling industries)

VOL' SHANSKIY M.I.  
FEITMAN, G.I.; VOL' SHANSKIY, M.I.

Production of ethyl alcohol in the U.S.A. Spirt. prom. 24 no.2:  
34-35 '58. (MIRA 11:3)

(United States--Ethyl alcohol)

*VOL'SHANSKIY, M.I.*  
FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Electronic eyes inspect drinks (from "Electronic Industries and  
Tele-Techn.," 58 no.2 1957). Spirt.prom. 23 no.8:31 '57.  
(MIRA 11;1)

(Bottling) (Photoelectric cells)



FERTMAN, G. I.; VOL'SHANSKYI, M. I.

Apparatus for producing yeasts. Spirt. prom. 26 no.3:32-35 '60.  
(MIRA 13:10)

(France--Yeast)

BEM, Rudolf [Böhm, Rudolf]; PLEVA, Vladimir; VOL'SHANSKIY, M.I.  
[translator]; TINYAKOV, G.G., doktor biol. nauk, prof.  
red.; TSIPERSON, A.L., red.

[Microscopy of meat and raw material of animal origin.  
Translated from the Czech] Mikroskopiia miasa i syr'ia  
zhivotnogo proiskhozhdeniia. Izd.2., perer. i dop. Mo-  
skva, Pishchevaia promyshlennost', 1964. 334 p.  
(MIRA 18:3)

VOLSHENSKIY, A.V., prof. doktor tekhn. nauk; TIRANOVA, T.M., inzh.; VINOGRADOV,  
B.N., inzh.

Sulfate resistant cements from slag of electrophosphorous production.  
Stroi.mat. 10 no.8:26-28 Ag '64. (MIRA 17:12)

02411-67 EWT(1)/T WR/GD/JXT

ACC NR: AT6022332

SOURCE CODE: UR/0000/66/000/000/0026/0033

AUTHOR: Shubarin, Yu. V.; Gorobets, N. N.; Voloshin, V. A.

ORG: None

TITLE: Effect which reflections in elliptically polarized antennas have on the polarization of their field of radiation

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya antennoykh ustroystv. Doklady. Moscow, 1966, 26-33

TOPIC TAGS: circularly polarized antenna, electromagnetic wave reflection, antenna polarization

ABSTRACT: The authors consider reflections in elliptically polarized antennas and their effect on deviations in the polarization of the field radiated by the antenna from the theoretical value. Antennas with phasing sections in the feeder channel are considered. The phasing section is an anisotropic medium where the rate of propagation of electromagnetic waves depends on polarization and differs for the mutually perpendicular components. This section splits an incident linearly polarized wave into two orthogonally polarized components which are propagated at different velocities so that they are shifted in phase by a given angle at the output of the section resulting in an elliptically polarized field.

Card 1/2

L 02411-67

ACC NR: AT6022332

Formulas are given for determining the effect which reflections from the exciter aperture have on polarization of the radiated field and it is shown that the coefficient of ellipticity is considerably reduced by these reflections in the case of waveguide radiating elements. This effect is insignificant for horn radiators. Variations in the polarization of the field emitted by the antenna are also considered from the standpoint of reflector-exciter interaction. It is found that this type of interaction causes a considerable reduction in the coefficient of ellipticity for the entire antenna when the phasing section is adjusted for circular polarization in free space. This effect may be used if elliptical polarization is necessary in the center of the antenna aperture for producing a circularly polarized field at the principal maximum of antenna radiation since the directional diagram for the exciter is ordinarily not identical with respect to components and the amplitude distributions with respect to components differ at the aperture. Orig. art. has: 3 figures, 15 formulas.

SUB CODE: 20/ SUBM DATE: 22Mar66/ ORIG REF: 002

Cord 2/2 hs

GOLUB', N.S.; VOLSHINA, R.K.

Industrial accidents in building the Leningrad subway. Zdrav.  
Ros. Feder. 6 no.1:21-25 Ja '62. (MIRA 15:3)

(LENINGRAD--SUBWAYS)  
(LENINGRAD--BUILDING--ACCIDENTS)

1st and 2nd Orders		Processes and Properties Index		3rd and 4th Orders	
<p>CA</p> <p>115</p> <p>Action of gymnastic exercises on the gas exchange, heart, vascular system and blood. Y. A. VOISHINSKI, O. S. GANN AND A. N. KRATOVNIKOV. <i>Russ. J. Physiol.</i> 13, 352-354 (1969) - The exercises increase the gas exchange, pulse, vascular activity as measured by the blood pressure and the amt. of hemoglobin and leucocytes, and effect changes in the nature of the formed elements of the blood. The increase in the gas exchange is directly proportional to the musculature employed in each exercise. The further increased respiratory coeff. after cessation of exercise suggests a definite after effect.</p> <p>B. C. A</p>					
<p>ASB-514 METALLURGICAL LITERATURE CLASSIFICATION</p>					
1st Order		2nd Order		3rd Order	
1st Order		2nd Order		3rd Order	

131 AND 132 (REVISED)
100 AND 010 (REVISED)

*BC*
*1-3*

PROCESSED AND PROPERTY INDEX

Recovery of A-bombs from air by silica gel.  
 I. A. Yegorov, V. A. Gerasov, and E. A. Chumakova  
 (Mosk. Kautschuk, 1954, No. 1, 1-12).—The SiO<sub>2</sub> gel  
 was activated by heating in an electric furnace for  
 3-5-6 hr; at 250-300°. The average absorption was  
 4 wt.-% of C<sub>2</sub>H<sub>4</sub> at 25° (max. 6%). with a speed of  
 air passage of 0.005-0.100 m. per sec. The gas  
 was recovered (94-96 wt.-%), and the gel regener-  
 ated, by heating to 250-300°, the regenerated gel  
 being somewhat less adsorptive. (M. Ann.)

ASH-51A METALLURGICAL LITERATURE CLASSIFICATION
12-1-54

SECOND DIVISION
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[illegible]

LIT AND INFO SERIES										PROC. AND PROPERTIES INDEX										LIT AND INFO SERIES									
BC																				B Z I									
<p>Stability of hydrogen in pressure systems at 500-600° I. A.            Vol. 1000, M. K. Sazon, L. B. Kravtsov, and G. N. Sakharenkova            (Sov. Akad. Nauk, 1968, No. 1, 8-12).—When <math>(CH_4, CH_3)_2N_2</math>            mixtures (0.50-3:1) were passed at 500-600° through a tube            (0.5-1.0 c.c./m. cm. of tube) change (dimerization, production of  <math>H_2</math> and <math>CH_4</math>) was observed only at 600° and increased (0.7-77%)            with decreasing velocity and proportion of <math>N_2</math>. Cf. Abs. (c).</p>																													
ASA-51A METALLURGICAL LITERATURE CLASSIFICATION																													
FROM SYMBOL										FROM SYMBOL										FROM SYMBOL									
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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z										A B C D E F G H I J K L M N O P Q R S T U V W X Y Z										A B C D E F G H I J K L M N O P Q R S T U V W X Y Z									

5. C. L.

55 - 5/11/46

Oxidation of synthetic rubbers. I. A. VOLSHINSKI  
and L. I. LOGINOVA (Kau. buk. i Rezin., 1946,  
No. 4-6, 41-7; Chem. Zentr., 1946, 22, 2300;  
Rev. Cdn. Caout., Doc. Anal., 1946, 22, 3).—  
Sodium butadiene rubber absorbs oxygen at ordinary  
temperature or at 100° without modification of its  
mechanical properties. Other tests have been  
carried out relating to rubber in solution in carbon  
tetrachloride and to liquid rubber (Divinylol). The  
addition of oleates of copper, manganese, and  
cobalt accelerates oxidation. The rubber dis-  
integrates and is transformed into a hard product  
that can be pulverised and contains 10 to 18% of  
combined oxygen.

352121.0032301

1946

[illegible]

DYTNEFSKIY, Yu.I.; ALEKSANDROV, I.A.; SHEYNMAN, V.I.; VOL'SHONOK, Yu.Z.;  
KUPERMAN, A.M.

Investigating hydraulics and mass transfer regularities in columns with  
corrugated downcomerless type plates. Khim.prom. no.1:70-74 Ja '64.  
(MIRA 17:2)

SHEYNMAN, V.I.; ALEKSANDROV, I.A.; KOGAN, Yu.S.; VOL'SHONOK, Yu.Z.;  
LIZUNKOV, V.P.; SHVETS, Ye.M.

New design of a plate for rectifications columns. Khim.i tekhn.  
topl.i masel 7 no.5:54-60 My '62. (MIRA 15:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
neftyanogo mashinostroyeniya.  
(Plate towers)

VOLSHOVA, V.A. i PUDTSOV, M.V.

24804. VOLSHOVA, V.A. i PUDTSOV, M.V. Sintez Khimuklidina. Zhurnal Obshchey

Khimii, 1949, Vyp 7, S. 1378-81.—Bibliogr: S. 1381

SO: Letopis' No. 33, 1949

**Capacity of the double layer of the mercury electrode in dilute solutions of hydrochloric acid and of potassium chloride.** M. A. Vashina and A. N. Frankin. *Compt. rend. acad. sci. U. S. S. R.* 24, 618, 619 (1959) (English); preceding abstract. A comparison of capacity curves for the Hg electrode in 1 N, 0.1 N, 0.01 N and 0.001 N KCl and in 0.001 N and 0.0001 N HCl solutions, where capacity is plotted against the electrode potential referred to a normal calomel electrode, with those derived according to Gouy's theory (cf. C. A. 10, 770) indicated that the calculated capacity values have the same general form but are somewhat lower than those observed. This deviation shows that there are also specific attractive forces between the metallic surface and the ions which do not depend upon the charge.

George Ayres

ASO-364 - DETAILING LITERATURE CLASSIFICATION



VOISHTEYN, L.M.; MOGILEVKINA, M.F.

Chloroplatinites of monomethionine complexes of bivalent platinum.  
Zhur. neorg. khim. 10 no.2:542-543 F '65. (MIRA 18:11)

1. Novosibirskiy gosudarstvennyy universitet. Submitted June  
10, 1964.

VOLSHEYN, L.M.; KRYLOVA, L.F.; MOGILEVKINA, M.F.

Reaction of methionine with Reiset's second base chloride. Zhur.  
neorg. khim. 10 no.9:1976-1979 S '65. (MIRA 18L10)

1. Novosibirskiy gosudarstvennyy universitet.

10

CH

The mechanism of the action of glyoxal on potassium chloroplatinate (potassium tetrachloroplatinate). A. A. Gritsenko and L. M. Vashstein. *Compt. rend. acad. sci. U. R. S. S. R.* 245: N(10) (1976). R<sub>1</sub>14Cl<sub>4</sub> reacts with glycine to form cis and trans isomers of (NH<sub>2</sub>CH<sub>2</sub>CHCl<sub>2</sub>)<sub>2</sub> in the ratio 1:2. This is counter to the usual case where platinites react with NH<sub>3</sub> or amines. If the reaction is carried out in a solution, containing sufficient alkali to be equiv. to the carboxyl, the ratio of cis to trans forms is 8:1. It is thought that when the reaction takes place without alkali and with heating there is formation of the cis-diglycine along with platotetraglycine. The latter compound, when heated in the presence of H<sub>2</sub>O is changed totally into trans-diglycine, then giving a high ratio of trans to cis forms. A mechanism embodying this idea is worked out. The platotetraglycines were prepd. C. R. P. Jeffreys

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

RECORD MAY ONLY BE USED FOR IDENTIFICATION PURPOSES

**Complex compounds of bivalent platinum with glycine.**

A. A. Ginzberg and I. M. Yushman, *Bull. Acad. Sci. Div. Chem. Sci., Div. Chem. Sci., USSR*, 1957, No. 1, 3-23 (in German 21-41); cf. *C. A.* 50, 6849; 51, 39009.  
Salts of the type  $M_2[Pt(NH_2CH_2COO)_4]$  were prepd. by addn. of a excess of a neutral glycine soln. to  $K_2PtCl_4$ .

In this manner  $H_2Pt(NH_2CH_2COO)_4$ ,  $Ag_2Pt(NH_2CH_2COO)_4$ , and the corresponding  $NH_4$  salts were obtained. Theoretical quantities of inorg. acids added to the above salts yield the complex acid  $H_2Pt(NH_2CH_2COO)_4$  in the cryst. state. The latter acid exhibits marked ampholytic properties unlike those of amino acids. A series of salts containing the cation  $[Pt(NH_2CH_2COO)_4]^{2-}$  is described, among which are  $[Pt(NH_2CH_2COO)_4](NO_3)_2$ ,  $[Pt(NH_2CH_2COO)_4]Cl$ , and  $[Pt(NH_2CH_2COO)_4]I$ . These salts when treated with  $HCl$  undergo a peculiar change in accord with the equation  $[Pt(NH_2CH_2COO)_4]X_2 + 2HX \rightarrow H_2Pt(NH_2CH_2COO)_4 + 2X^-$ . The previously cited bivalent cation behaves as a tetrabasic acid. The values of its acidic disocn. are approx. as follows:  $K_1 = 4.0 \cdot 10^{-5}$ ,  $K_2$  between  $4.0 \cdot 10^{-5}$  and  $4.7 \cdot 10^{-5}$ ,  $K_3 = 4.0 \cdot 10^{-6}$  and the lower limit of  $K_4$  is  $10^{-6}$ . Aq. solns. of  $H_2Pt(NH_2CH_2COO)_4$  on warming decomp. quantitatively into *cis*-diglycine (yield, *cis*-form 65-66% and *trans*-form 4-5%). On warming with  $KCl$  aq. solns. of increasing  $KCl$  content the acid undergoes pro-

gressive change with an increasing yield of *trans*-diglycine and a decreasing yield of the *cis*-form. The latter change is even more marked when  $HCl$  solns. are substituted for  $KCl$ . Thus in 0.5 N  $HCl$ , the yield of *trans*-diglycine is quant. With low  $HCl$  concns. the action of the latter is entirely catalytic. However, at higher acid concns. its catalytic effect ceases and the  $Cl^-$  ions the compn. of the reaction product. A theoretical interpretation of the transformation of tetraglycine into diglycine derives is also included. W. A. Cook.

ASH-55-A METALLURGICAL LITERATURE CLASSIFICATION

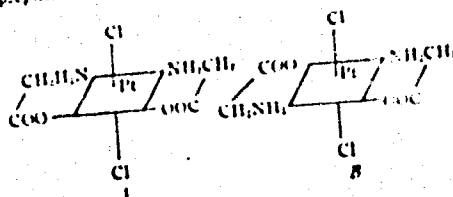
BC

Chemical compounds of dissolved platinum with glycine. A. A. Gershman and J. M. Voznessen (Dokl. Akad. Nauk SSSR, 1963, 2--24).  $\text{H}_2\text{PtCl}_6$  and glycine (MG) yield  $\text{K}_2\text{PtCl}_6$  from which  $\text{H}_2\text{PtO}_4$  (I) ( $\text{Na}_2(\text{NH}_4)_2$  and  $\text{Ag}_2$  salts) is obtained with  $\text{HCl}$  or  $\text{HNO}_3$ . (I) has markedly catalytic properties, the series  $(\text{I}) \rightarrow [\text{PtCl}_2(\text{MG})]^- \rightarrow [\text{PtCl}(\text{MG})_2]^- \rightarrow [\text{Pt}(\text{MG})_4]^{2-} \rightarrow [\text{Pt}(\text{MG})_6]^{4-}$  being obtained by varying the pH of the solutions. The salts  $[\text{Pt}(\text{MG})_4]^{2-}$ ,  $[\text{Pt}(\text{MG})_5]^{3-}$ ,  $[\text{PtCl}_2]^{2-}$ ,  $\text{Cl}_2$  and  $\text{SO}_2$  are prepared from (I) and the appropriate acids. (I) yields chiefly  $\text{cis-PtCl}_2$  with boiling  $\text{H}_2\text{O}$ , and chiefly  $\text{trans-PtCl}_2$  with  $\text{Et}_3\text{N-HCl}$ . The mechanism of the reactions is discussed. R. T.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

Compounds of bivalent platinum with  $\alpha$ -alanine.  
A. A. Grinberg and L. M. Volshstein. *Dokl. akad. sci. U. R. S. S., Classe sci. math. nat. chim.* 1937, 885-903 (in German 903-5); cf. *C. A.* 25, 3583; 27, 1290; 29, 6460; 31, 7351. — Compds. first studied by Ley and Picken (*C. A.* 6, 207) included those of  $\alpha$ -alanine and glycine. The Pt salt of alanine,  $\text{PtAn}_2$ , is obtained in 85% theoretical yield by the reaction:  $\text{K}_2\text{PtCl}_6 + 2\text{AnH} \rightarrow \text{PtAn}_2 + 2\text{KCl} + 2\text{HCl}$ . The yield could be raised by concn. of filtrate but at the expense of purity. The trans isomer is formed; the cis isomer could not be obtained.  $\text{PtAn}_2$  is obtained by adding  $\text{K}_2\text{PtCl}_6$  to  $\text{AnH}$  soln. in  $\text{NaOH}$ , heating the mixt. and adding  $\text{H}_2\text{SO}_4$  and  $\text{KMnO}_4$  to the  $(\text{Pt}(\text{AnH})_2\text{Cl})_2$  formed.  $\text{PtAn}_2$  is very hygroscopic and could not be obtained as a solid. The mixed salt of alanine and glycine,  $\text{PtAnGl}$ , is prepd. as follows:  $\text{K}_2(\text{PtCl}_6\text{An}) + \text{GHI} \rightarrow \text{PtAnGl} + \text{KCl} + \text{HCl}$ . GHI should be 4 times the theoretical quantity. Yield 75-80% theoretical.  $\text{PtCl}_2(\text{AnH})_2$  and  $\text{PtCl}_2(\text{AnH})(\text{GHI})$  are obtained at 90% theoretical yield by adding concd.  $\text{HCl}$  to  $\text{PtAn}_2$  or  $\text{PtAnGl}$ .  $(\text{Pt}(\text{S}:\text{C}(\text{NH}_2)_2)_2(\text{AnH})_2)(\text{GHI})_2\text{Cl}_2$  and  $(\text{Pt}(\text{S}:\text{C}(\text{NH}_2)_2)_2(\text{AnH})_2)\text{Cl}_2$  are obtained at 65-70% theoretical yield by adding  $\text{S}:\text{C}(\text{NH}_2)_2$  to  $\text{PtCl}_2(\text{AnH})(\text{GHI})$  or  $\text{PtCl}_2(\text{AnH})_2$ . They are very hygroscopic but after prolonged drying over  $\text{P}_2\text{O}_5$  are found to contain  $2\text{H}_2\text{O}$  of crystn.  $\text{PtAn}_2(\text{NH}_3)_2$  and  $\text{PtAnGl}(\text{NH}_3)_2$  are obtained by adding  $\text{NH}_3$  to  $\text{PtAn}_2$  or  $\text{PtAnGl}$  at 70-80% theoretical yield. Both are highly sol. in water. V. A. Kalichevsky

137 AND 138 000381  
PROCESSED AND REPRODUCED UNDER  
The action of glycine on potassium chloroplatinate. *Bull. Acad. Sci. A. A. Grinberg and I. M. Volchtein. Russ. Chem. Rev. (German) 300-1. R. S. N., *Chem. Abstr.* 1941, 3517-8 (in German 300-1). Glycine (2.2 g.) in 30 cc. H<sub>2</sub>O was treated, with heating, with 1.2 g. K<sub>2</sub>PtCl<sub>6</sub>. The mixt. was heated in a steam bath for 1.25-1.5 hrs. Immediately upon mixing, the soln. became almost red then faded to a greenish yellow. After the heating period the soln. was allowed to crystallize for several days, two fractions being collected. The 2 fractions had the same compn.: PtCl<sub>2</sub>Cl<sub>2</sub>(Cl) = H<sub>2</sub>NCH<sub>2</sub>COO. The total yield approached 45-50%, with approx. 10% being left in soln. The two fractions differ somewhat in their cryst. form and in chem. behavior. The 1st fraction (I) heated with concd. HCl dissolved very slowly on boiling with excess HCl, yielding on cooling yellow crystals of Pt(CHH)<sub>2</sub>Cl<sub>2</sub>. The 2nd (II) fraction heated with concd. HCl dissolved rapidly and did not crystallize on cooling. Reduction of I by K oxalate was slow and yielded *trans*-PtCl<sub>2</sub>, while II reacted rapidly yielding *cis*-PtCl<sub>2</sub>. The *cis* structure (A) of II and the *trans* structure (B) of I were further confirmed by comparison with preps. made from samples known to be *trans*-PtCl<sub>2</sub> and*



*cis*-PtCl<sub>2</sub>. Pt(CHH)<sub>2</sub>Cl<sub>2</sub> is apparently formed by breaking of the glycine complex ring with liberation of the COOH group and introduction of Cl atoms into the complex at the points of attachment of the COO groups. The product is a dibasic acid, which can be titrated. Addn. of AgNO<sub>3</sub> gives a yellow ppt., apparently of Ag<sub>2</sub>(PtCl<sub>2</sub>Cl<sub>2</sub>), which on treatment with HNO<sub>3</sub> yields AgCl and PtCl<sub>2</sub>Cl<sub>2</sub>.  
G. M. Kosolapoff

6

PROCESSING AND PROPERTIES INDEX

ca

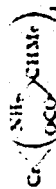
Dinuclear internal complex salt of chromium and glycine, and the products of its reaction with hydrochloric acid. L. M. Vishitsin (Kazan Inst. Chem. Tech. Comp. 7767, *ibid.*, 10, 12, 14(1951). CrCl<sub>3</sub>·6H<sub>2</sub>O (II) Acad. Nauk S.S.S.R. 48, 111-114(1951). Prepared according to Chuganov and Serbin (C.A. 5, 1401). Treated with 1 mol. HCl it forms [CrCl<sub>2</sub>(H<sub>2</sub>O)<sub>4</sub>], very hygroscopic, sol. in H<sub>2</sub>O, insol. in EtOH. With 2 mols. HCl, 1 form [CrCl<sub>2</sub>(HCl)(H<sub>2</sub>O)<sub>3</sub>], green needles, very hygroscopic, sol. in H<sub>2</sub>O and in EtOH. With 3 mols. HCl, 1 form Cr-(HCl)<sub>3</sub>(H<sub>2</sub>O)<sub>3</sub>, green, hygroscopic, and sol. in H<sub>2</sub>O and (HCl)<sub>3</sub>(H<sub>2</sub>O)<sub>3</sub>, green, hygroscopic, and sol. in H<sub>2</sub>O and EtOH. These reactions lead to the conclusion that I is a dinuclear complex corresponding to double the empirical formula.

Frank Goulet

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION



Transition derivatives of chromium. L. M. Vashkova (Leningrad Technol. Inst., J. Gen. Chem. U.S.S.R.), 17, 2948-53/1947 (in Russian); cf. C. A. 41, 6436. In the complex  $[\text{Cr}(\text{as})_3]$ , where  $\text{as} = \text{N}(\text{CH}_3)_2\text{MeCOO}^-$ , each as occupies 2 coordination places, being bound to Cr by both the  $\text{CO}_2$  and the  $\text{N}(\text{CH}_3)_2$  group.



Action of dil. acids splits progressively 1, 2, and 3 Cr-OCO bonds, resulting in a series of complex  $[\text{Cr}(\text{as})_3]$ ,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})]$ ,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_2]$ ,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$ , where N = as or OH. This series represents a gradual transition from a "complete inner complex" with all 6 coordination places occupied by cycles to a noncyclic transammine (where as is coordinated with Cr only through  $\text{N}(\text{CH}_3)_2$ , over partial inner complexes. Transitions in this series are reversible, acids bringing about gradual opening of the as rings to  $\text{OH}$ , alkali acting in the opposite direction. Transformation in the 1st direction was effected by short (10 min.) heating with the stoichiometric amt. of 0.1 N  $\text{HCl}$ , followed by evapn. to dryness; the complex, highly sol. in  $\text{H}_2\text{O}$ , are obtained in well-formed crystals and show the colors:  $[\text{Cr}(\text{as})_3]$  rose,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})]$  cherry red,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_2]$  purple red,  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$  green. In soln. in  $\text{H}_2\text{O}$ , Cl is displaced by  $\text{H}_2\text{O}$ , giving rise to  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$ ;  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$  then, an aq. soln. of  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$ , originally light green, veers gradually to purple, particularly rapidly in dil. soln. and on heating in 1-2 min. on boiling. AgNO<sub>3</sub> ppt. AgCl rapidly from  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$  and, somewhat more slowly, from  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_2]$ ; however, from an aq. soln. of  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_2]$ , significant pptn. takes place only after preliminary boiling. The latter monochloride in contact with  $\text{H}_2\text{O}$ , alk., is slowly transformed into a ppt. of  $[\text{Cr}(\text{as})_2(\text{H}_2\text{O})_3]$ ; this does not take place with either the dichloride or the trichloride. The dry complex withstands without decomposition prolonged heating to 150-160°.

AD-514 DETAILUNCLAL LITERATURE CLASSIFICATION

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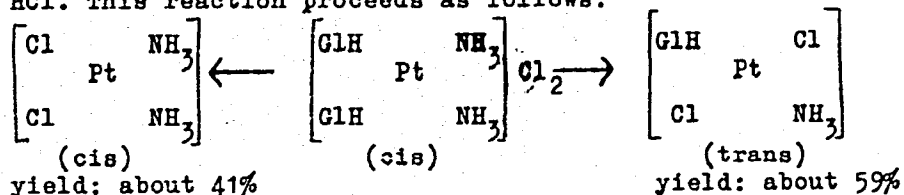
68105  
SOV/78-5-1-7/45

AUTHORS: Volshteyn, L. M., Volodina, I. O.

TITLE: New Data on the Complex Compounds of Bivalent Platinum With Glycocoll

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 35 - 38 (USSR)

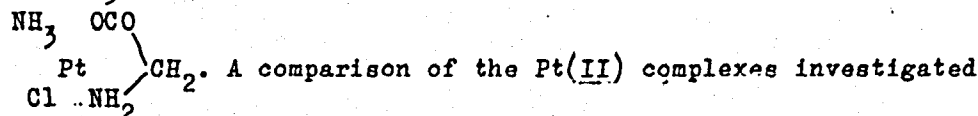
ABSTRACT: The cleavage of mixed tetrammine cis-[Pt(GlH)<sub>2</sub>(NH<sub>3</sub>)<sub>2</sub>]Cl<sub>2</sub> under the action of HCl has not yet been investigated (GlH = glycocoll, Gl = glycocoll ion). The authors prepared cis-[Pt(GlH)<sub>2</sub>(NH<sub>3</sub>)<sub>2</sub>]Cl<sub>2</sub> (already described by A. A. Grinberg and B. V. Ptitsyn (Ref 3)) from cis-[PtGl<sub>2</sub>]. The first-mentioned compound was cleft with HCl. This reaction proceeds as follows:



Card 1/2

New Data on the Complex Compounds of Bivalent Platinum SOV/78-5-1-7/45 68105  
With Glycocoll

Titration of the resulting trans- $[\text{Pt}(\text{GlyH})\text{NH}_3\text{Cl}_2]$  with KOH yielded the soluble salt  $\text{K}[\text{PtGlyNH}_3\text{Cl}_2]$ . If the solution of this salt is allowed to stand for 24 hours, the nonelectrolyte  $\text{PtGlyNH}_3\text{Cl}$  is precipitated which has the cyclic structure



A comparison of the Pt(II) complexes investigated earlier with  $\alpha$ -aminobutyric acid and  $\epsilon$ -aminocaproic acid shows that Pt and amino acid can be more easily separated in the case of  $\alpha$ -amino acids than in the case of  $\epsilon$ -amino acids. There are 14 references, 12 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: September 1, 1958  
Card 2/2

VOLSHTEYN, L. M.

"Complex Compounds of Trivalent Chromium With the Simplest Amino Acids." Sub 14 Mar 51, Inst of General and Inorganic Chemistry imeni N. S. Kurnakov, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

*Dr. Chem. Sci.*

VOLSHTEYN, L.M.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Inorganic Chemistry

① chem  
A new class of complex compounds of chromium with  
amino acids. L. M. Volshstein. *Bull. Acad. Sci. U.S.S.R.,*  
*Div. Chem. Sci.* 1952, 269-77 (Engl. translation).—See  
C.A. 46, 10036A. H. L. H.

9-2-54  
EAP

VOLSHTEYN, L.M.

Reaction of trivalent-chromium salts with glycol and alanine.  
Izv.Sekt.plat.i biog.met. no.27:20-32 '52. (MLRA 7:5)  
(Chromium organic compounds) (Glycol) (Alanine)

VOLSHTEYN, L.M.

Action of acids on intracomplex compounds of trivalent chromium with  
glycol and alanine. Izv.Sekt.plat. 1 blag.net. no.27:33-46 '52.  
(MLRA 7:5)  
(Chromium organic compounds) (Glycol) (Alanine)

VOLSHTEYN, L.M.; BAVRIN, A.P.

Electric conductivity of glycol complex chromium compounds. Izv. Sekt.  
plat.i blag.net. no.27:47-61 '52. (MLRA 7:5)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR.  
(Chromium organic compounds)



VOLSHTEYN, L.M.

U S S R .

Two modifications of potassium diglycinodisoxalatochromate.  
L. M. Volshteyn and V. P. Malonova (Chem. Technol.  
Inst. Dnepropetrovsk. Doklady Akad. Nauk S.S.S.R.  
93, 479-82(1953); cf. C.A. 45, 10036k. — Treatment of  
concd. soln. of  $[CrG(GH)_2O_2C_2O_4]$  or  $[CrG(GH)_2C_2O_4]$ ,  
(where G = glycine unit) with 0.8 mole KOH soln., boiling,  
and evapn. gave a glassy mass; after soln. in 2-4 ml. cold  
 $H_2O$  it slowly deposited a pink ppt. of  $K[CrG_2C_2O_4]$ , which  
was dried at 110-15°. When this was taken up in boiling  
 $H_2O$ , evapd. on a steam bath, the residue dried at 110-15°  
and ground, there was formed a violet modification of the  
same compn. In  $NH_4OH$  neither yields a ppt. of Cr hy-  
droxide, nor does aq. soln. of  $CaCl_2 \cdot AcONa$  give a Ca oxalate  
ppt. in the cold; the latter forms slowly on boiling. Molar  
cond. of the pink salt is 88.8 ohm<sup>-1</sup> cm.<sup>2</sup> at 0.001 M and  
80.2 at 0.025, while for the violet form these are 103 and  
92.4, resp. The pink salt is cryst. and anisotropic; the  
violet form appears to be amorphous and glassy. The  
violet form is readily sol. in  $H_2O$ ; the pink form slowly  
changes into the violet in aq. soln. and is very much less sol.  
Addn. of EtOH or  $Me_2CO$  to freshly prepd. aq. soln. of the  
pink form immediately gives a ppt. of the original salt;  
the violet form yields only a cloudy soln., from which oil  
seps. slowly. Cryoscopic detn. of mol. wt. gave 310-18 for  
the pink salt and the violet salt. Addn. of EtOH or  $Me_2CO$   
to concd. aq. soln. of the violet form yields a viscous oil,  
which on drying reverts to the violet salt. The two forms  
appear to be isomers with possibly different forms of ring  
closure around the central Cr atom. O. M. Kosolapoff -

*VOLSHTEYN, L.M.*

GRINBERG, A.A. (Leningrad); BABAYEVA, A.V. (Moscow); YATSIMIRSKIY, K.B. (Ivanovo); GOREMYKIN, V.I. (Moscow); BOLIY, G.B. (Moscow); FIALKOV, Ya.A. (Kiyev); YAKSHIN, M.M. (Moscow); KEDROV, B.M. (Moscow); GEL'MAN, A.D. (Moscow); FEDOROV, I.A. (Moscow); MAKSIMYUK, Ye.A. (Leningrad); VOL'KENSHTEYN, M.V. (Leningrad); ZHDANOV, G.S. (Moscow); PTITSYN, B.V. (Leningrad); ABLOV, A.V. (Kishinev); VOLSHTEYN, L.M. (Dnepropetrovsk); TROITSKAYA, A.D. (Kazan'); KLOCHKO, M.A. (Moscow); BABAYEVA, A.V.; TRONEV, V.G. (Moscow); RUBINSHTEYN, A.M. (Moscow); CHERNYAYEV, I.I.; GRINBERG, A.A.; TANANAYEV, I.V.

Explanation of the transeffect. Izv.Sekt.plat.1 blag.met. no.28:  
56-126 '54. (MLRA 7:9)

(Compounds, Complex) (Platinum)

VOLSHTEYN, L.M.; BAVRIN, A.P.; MOLOSNOVA, V.P.

Viscosity of aqueous solutions of glyccoll chromium complex compounds.  
Izv.Sekt.plat.i blag.met. no.28:161-165 '54. (MLBA 7:9)  
(Viscosity) (Glycine) (Chromium organic compounds) (Compounds,  
Complex)

VOLSHTEYN, L. M.

USSR/Chemistry - Complex compounds

Card 1/1 Pub. 22 - 16/40

Authors : Volshteyn, L.M., and Motyagina, G.G.

Title : ~~Complex chromium - beta-aminopropionic acid compounds~~  
: Complex chromium - beta-aminopropionic acid compounds

Periodical : Dok. AN SSSR 99/3, 399-402, Nov 21, 1954

Abstract : The derivation of numerous non-cyclic compounds of chromium with amino-acids is announced. Some of these non-cyclic compounds were obtained through direct addition of corresponding amino acids to chromic chloride. It was established that such compounds contain coordinated glycol or alanine molecules and are quite strong acids. The effect of alkalis on the separation of the protons from the coordinated amino acid molecules and origination of certain radicals, which close the cycle with the formation of internal complex salts, is discussed. The effect of alkali on non-cyclic compounds is explained. Five references: 4-USSR and 1-German (1906-1952).

Institution: The F.E. Dzerzhinskiy Chemical-Technological Institute, Dnepropetrovsk

Presented by: Academician I.I. Chernyaev, June 24, 1954

Volshteyn, L.M.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 116 - 5/29

Authors : Volshteyn, L. M., and Kocherga, N. M.

Title : Oxalate-dibioxalate-glycino-potassium chromate

Periodical : Ukr. khim. zhur. 21/6, 710-713, Dec 1955

Abstract : Investigation was made to determine the effect of KOH on a certain complex acid of the composition:  $[\text{Cr}(\text{NH}_2\text{CH}_2\text{CO}_2\text{H})_2\text{H}_2\text{O}(\text{C}_2\text{O}_4\text{H})_3]$ . The synthesis of an oxalate-dibioxalate-glycino-potassium chromate salt in a complex anion the Cr of which is bound with one glycoll radical, one  $\text{C}_2\text{O}_4$  radical and two  $\text{C}_2\text{O}_4\text{H}$  radicals, is described. The chemical properties of the salt and its formula are listed. Five USSR references (1931-1955).

Institution : Dnepropetrovsk Chimicotechnological Inst. im. F. Ye. Dzerzhinskiy

Submitted : December 20, 1954

VOLSHTEYN, L.M.

4 Molecular weight of diglycinodiglucochromium chloride  
in aqueous solutions. L. M. Volshtein, *Izvest. Sektora  
Platiny i Drug. Blagotex. Khim., Inst. Obshchei i Neorg.  
Khim., Akad. Nauk S.S.S.R.* No. 29, 107-12 (1955).  
Cryoscopic measurements of freshly prep'd. aq. solns. (0.1-  
0.5M) of  $\text{Cr}[(\text{NH}_4)_2\text{C}_2\text{O}_4(\text{H}_2\text{O})_2]\text{Cl}$  revealed that the  
compd. undergoes polymerization, followed by partial de-  
polymerization. For example, 0.1M soln. gave the mol.  
wt. of the salt at the start of the expt. as 358, and after one  
month it changed to a const. value of 250. However, the  
initial mol. wt. of 563 in the instance of 0.5M soln. de-  
creased after one month and remained unchanged at 328.

A. P. Kotloby

A  
MET

VOLSHTEYN, L. M.

VOLSHTEYN, L.M.

Closure of chromium-glycocol cycles. Part 1. Izv.Sekt.plat.i blag.  
met. no.31:101-106 '55. (MIRA 9:5)  
(Glycine) (Chromium compounds)



VOLSHTEYN, L.M.

Closure of chromium-glycocol cycles. Part 2. Izv.Sekt.plat.1  
blag.met. no.31:107-112 '55. (MLRA 9:5)  
(Glycine) (Chromium compounds)

VOLSHTEYN, L.M.: MOGILEVKINA, M.F.  
APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

Effect of alkalies on chromium oxalatoglycinoglycine. Izv.Sekt.plat.  
1 blag.met. no.31:113-119 '55. (MLRA 9:5)  
(Chromium compounds) (Alkalies)

VOLSHTEYN, L. M.

Inner complex salt of bivalent platinum with 3-aminopropionic acid. L. M. Volshtein and M. E. Mogilevskaya (P. E. Dzerzhinskii Chem. Technol. Inst., Dnepropetrovsk). *Doklady Akad. Nauk S.S.S.R.* 161, 418-21 (1955).—Heating 0.001 mole  $K_2PtCl_6$ , 0.018 mole  $H_2NCH_2CH_2CO_2H$ , and 0.008 mole KOH as an 0.8M soln. 6 hrs. on a steam bath, adding 15 ml. concd. HCl, refluxing 10 min., and cooling yielded a ppt. of yellow  $[Pt(H_2NCH_2CH_2CO_2H)_2Cl_2] \cdot (I)$ , sparingly sol. in cold  $H_2O$ , acidic to methyl orange, and giving a turbidity with cold  $AgNO_3$  and a ppt. on boiling. I can be titrated with base and phenolphthalein indicator. Titration of I with 0.1M KOH in the cold gave colorless  $[Pt(H_2NCH_2CH_2CO_2)_2] \cdot (II)$ , a hexane. II in 0.001M soln. at 25° has a molar cond. of 0.1 ohm<sup>-1</sup>sq. cm., confirming the inner complex structure of a nonelectrolyte. II with hot 1:1 HCl gave I. Both I and II were homogeneous. Thiourea treatment of I gave 87% colorless  $[Pt(H_2NCH_2CH_2CO_2)_2(CSN_2H_4)] \cdot (Cl_2 \cdot H_2O) \cdot (III)$ , indicating the trans-structure of I. I with hot concd.  $NH_4OH$  gave colorless  $[Pt(H_2NCH_2CH_2CO_2)_2(NH_3)_2]$ , which with concd. HCl formed colorless  $[Pt(H_2NCH_2CH_2CO_2)_2(NH_3)_2] \cdot (NH_4)_2Cl_2$ , readily titrating with  $AgNO_3$ ; excess HCl gave 52% yellow  $[Pt(NH_4)_2Cl_2]$ , again confirming the trans-structure of I. Hence II also has the trans-structure. III titrated with 0.1M KOH gave colorless  $[Pt(H_2NCH_2CH_2CO_2)_2(CSN_2H_4)]$ , mol. cond. at 25° 2.6 ohm<sup>-1</sup>sq. cm. at 25° in 0.0005M soln.

G. M. Kozlovskii

YOLSHTEYN, L. M.

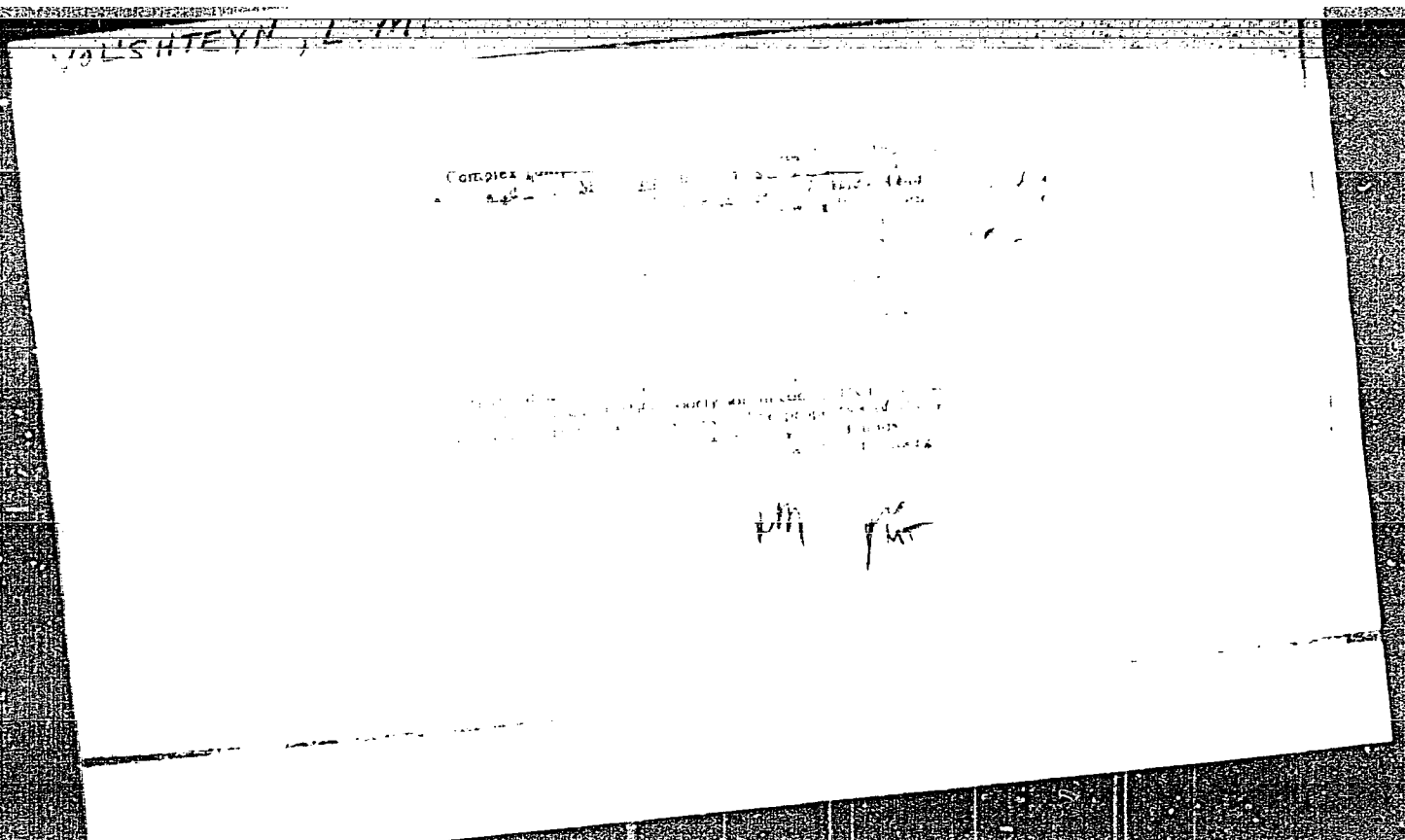
Complex compounds of bivalent platinum with tyrosine.  
L. M. Volshtein and N. S. Velikanova (P. B. Dzerzhinskii  
Chem.-Technol. Inst., Dnepropetrovsk). *Zhur. Neorg.  
Khim.* 1, No. 1, 48-52 (1958).—Aq. KOH (22 mmoles, 0.32M)  
and equiv. tyrosine were heated and treated with 5 mmols of  
 $K_2PtCl_4$  for 2 hrs. Excess undissolved tyrosine (approx.  
0.5 g.) was filtered off. The filtrate was boiled and 2-3  
drops of concd. HCl added. More amorphous tyrosine was  
pptd. Further addn. of concd. HCl (2-3 ml.) pptd. an ap-  
preciably quantity of dark-brown viscous mass (I), which was  
allowed to settle. The decanted supernatant liquor was  
filtered and treated with excess concd. HCl (5-6 ml.), and  
boiled 2-3 min. On cooling, a yellow cryst. ppt. (II)  
formed. After filtering, washing with  $H_2O$ ,  $EtOH$ , and  
 $Et_2O$ , it was shown by Pt and Cl analyses to correspond to  
platinum dichloro-dityrosine,  $Cl_2Pt(NH_2CH_2COOH)_2$ ,  
 $C_8H_{12}O_4$ , with coordinate bonding postulated between the  
Pt and the two N atoms. The yield was equiv. to about  
20% of the original  $K_2PtCl_4$ . On treating II with KOH in  
the cold, or more rapidly hot, a ppt. of platinum dityrosine,  
 $Pt(NH_2CH_2COO)_2$ ,  $C_8H_{12}O_4$ , is formed. A ring struc-  
ture is proposed in which the Pt is linked to the COO group  
and (by coordinate linkage) to the  $NH_2$  group. When 0.5  
g. of II is dissolved in 5 ml. of concd. aq.  $NH_3$ , and boiled  
for 2 min. and then cooled, platinum dityrosineammine,  
 $(NH_3)Pt(NH_2CH_2COO)_2$ ,  $C_8H_{12}O_4$ , is obtained. It may  
consist of complex compds. of K with Pt, Cl, and tyrosine.

C. H. Kuchumov

RM

~~VOESSTEN, L. M.~~ *Volstetn, L. M.*





AUTHOR:  
TITLE:

PERIODICAL:

ABSTRACT:

VOLSHTEIN, L.M., MOGILEVSKAYA, M.F.  
The Complex Compounds of Bivalent Platinum with Amino- $\epsilon$ -Carboxylic Acids  
(Kompleksnyye soyedineniya dvukhvalentnoy platiny s  $\epsilon$ -aminokaprinovoy  
kislotoy, Russian)  
Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 99-101  
<S.S.R.>

Recently the same authors described the compounds of the bivalent platinum ( $Pt^{2+}$ ) with  $\beta$ - and  $\gamma$ -aminoacids (with  $\beta$ -alanine and  $\gamma$ -aminobutyric acid -  $\gamma$ -H). In this connection it is of particular interest to note that the authors succeeded in obtaining Cis- and Trans-isomers of the compound  $[Pt(\epsilon H)_2 Cl]$  and platinites with the isomeric (cis- and trans-) cations  $[Pt(\epsilon H_2)_2 (NH_3)_2]^{2+}$ .  
The isomeric compounds:

- Cis-dichloride: found %: Pt 25,66; 36,82; 37,03; N 5,16
- Trans-dichloride: found %: Pt 36,86; 37,03; Cl 13,65; N 5,35
- Platinite: (cis structure) found %: Pt 47,09; 47,27; Cl 17,17; N 5,70; H 0,25

Card 1/2

20-1-27/64  
The Complex Compounds of Bivalent Platinum with Amino- $\epsilon$ -Capric Acid.

d) Platinite (trans structure) found %: Pt 47,01; 47,17;  
Cl 17,48; N 6,60; H 0,25.

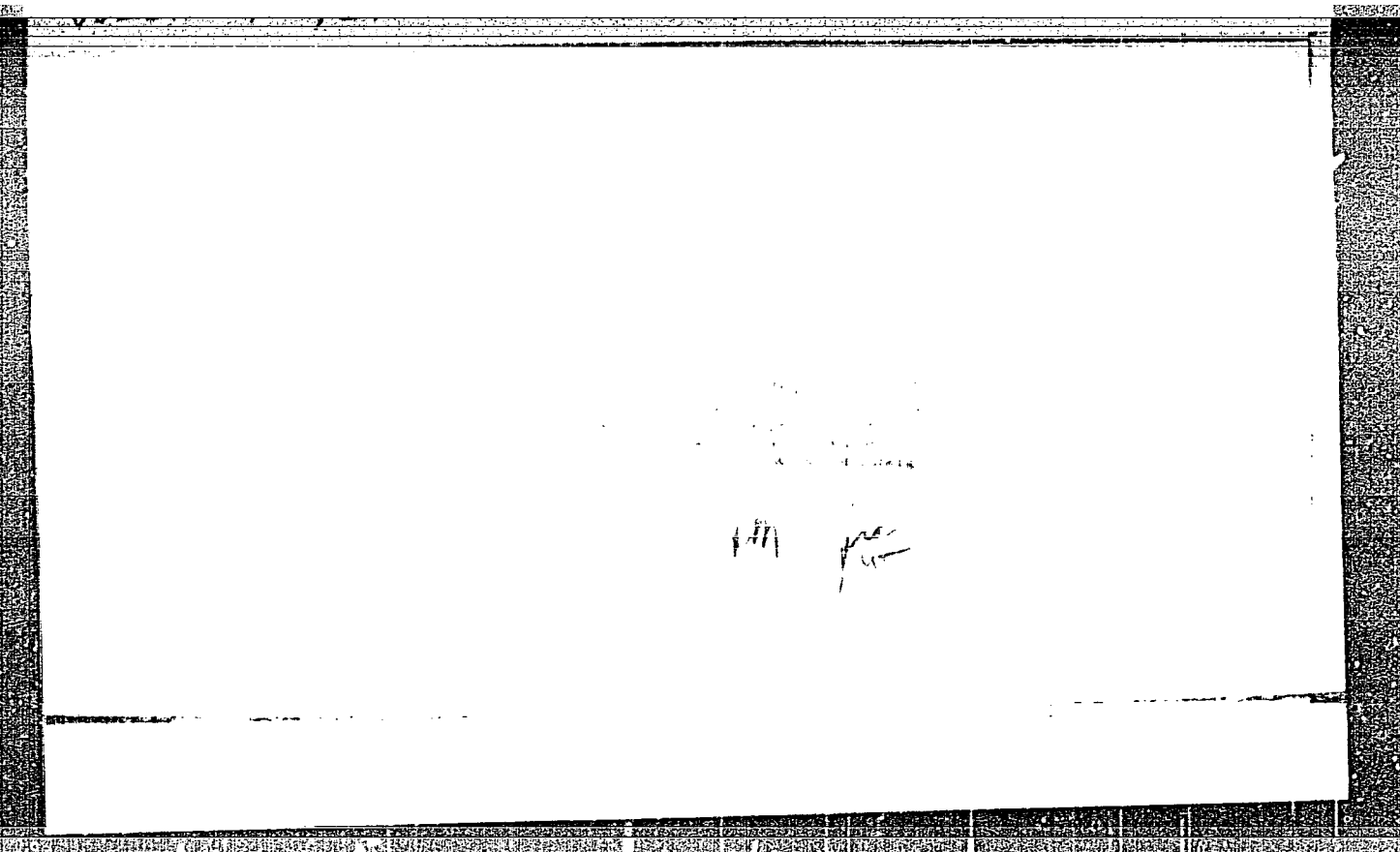
ASSOCIATION: Not given  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: Library of Congress

Card 2/2



"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9



APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

VOLNTEYN, L.M.; MOGILEVSKINA, N.F.

Two isomers of chloroaminomethionine platocycl-ide. Dokl. AN SSSR  
163 no.6:1385-1388 Ag '65. (MIRA 18:8)

1. Novosibirskiy gosudarstvennyy universitat. Submitted February 4, 1965.

VOLSHTEYN, L.M., doktor khim. nauk, prof.

Boris Vladimirovich Ptitsyn; on his sixtieth birthday. Izv.  
SO AN SSSR no.3 Ser. khim. nauk no.1:163-165 '63. (MIRA 16:8)

(Ptitsyn, Boris Vladimirovich, 1903-)

VOLSHTEYN, L.M.; ANOKHOVA, L.S.

Complex compounds of bivalent platinum with leucine. Zhur.neorg.khim.  
8 no.9:2053-2058 S '63. (MIRA 16:10)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy  
khimiko-tehnologicheskii institut.

VOLSHTEYN L.M.

VOISHTEYN, L.M.; VOLODINA, I.O.

Isomerization of inner complex salts of bivalent platinum with  
amino acids. Zhur.neorg.khim. 7 no.12:2685-2688 D '62.  
(MIRA 16:2)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy  
khimiko-tekhnologicheskoy institut imeni F.E.Dzerzhinskogo.  
(Platinum compounds) (Isomerisation) (Amino acids)

VOLSHTEYN, L.M.

"Basic principles of the chemistry of complex compounds" by  
V.A.Golovina, I.A.Fedorov. Reviewed by L.M.Volshtein.  
Zhur.neorg.khim. 8 no.1:261-262 Ja '63. (MIRA 16:5)  
(Complex compounds) (Golovina, V.A.) (Fedorov, I.A.)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.

Complex compounds of bivalent platinum with methionine. Zhur.neorg.khim.  
8 no.3:597-603 Mr '63. (MIRA 16:4)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy  
khimiko-tekhnologicheskii institut. (Methionine)  
(Platinum compounds)



VOLSHTEYN, L.M.; ZEGZHDA, G.D.

Mutual transformation of isomers of platinum divalene.  
Zhur.neorg.khim. 7 no.10:2315-2319 0 '62. (MIRA 15:10)

1. Dnepropertovskiy khimiko-tekhnologicheskoy institut imeni  
F.E.Dzerzhinskogo.  
(Platinum compounds) (Valine) (Isomerization)

L 13014-63 EWT(m)/BDS AFFTC/ASD/ESD-3 RM/JD  
 ACCESSION NR: AP3002909 S/0289/63/000/001/0163/0165

AUTHOR: Volshcheyn, L. M. (Doctor of chemical sciences, Professor)

58  
57

TITLE: Boris Vladimirovich Ptitsy\*n

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1963, 163-165

TOPIC TAGS: scientific accomplishments, radioactive strontium, thermal decomposition, divalent platinum, potassium chloroplatinate, oxidation-reduction process, thiosulfate, tetrathionate ions, zirconium, niobium

ABSTRACT: Prof. B. V. Ptitsy\*n, the division manager of the Institut neorganicheskoy khimii Sibirskogo otdeleniya AN (Institute of Inorganic Chemistry, Siberian Department, AN) has been honored on his 60th birthday for his numerous accomplishments for which he received several decorations. He developed the thermal decomposition of the ammoniates of divalent platinum and the reaction of potassium chloroplatinate with glycol. He prepared isomers of platinum diglycenes and proved their structure. He wrote a series of articles on the oxidation-reduction processes of platinum metals. This practical accomplishment also has a great theoretical value. He also investigated the reaction of various oxidizers

Card 1/2

L 13014-63

ACCESSION NR: AP3002909

on thiosulfate and tetrathionate ions. Furthermore, he investigated the oxidation processes of sulfur-containing compounds and studied in detail anions such as Cr sub 2 O sup 2-, sub 7 and Mn O sup -, sub 4. His second most important work is the investigation of the stability of the complexes in solutions. He developed the method for the determination of the instability constant of the complexes called the method of shifted equilibrium. He made a study of uranium and published numerous investigations of some complex compounds of zirconium and niobium. He introduced a method of removing radioactive strontium from organisms by its adsorption on hydroxylapatite crystals. In addition to all this he worked on many other scientific accomplishments.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 2/2

VOLSHTEYN, L.M.; ZEGZHDA, G.D.

Complex compounds of bivalent platinum with valine. Zhur.neorg.khim.  
7 no.7:1525-1529 JI '62. (MIRA 16.3)

1. Dnepropetrovskiy khimiko-tekhnicheskoy institut imeni F.E.Dzerzhinskogo.  
(Platinum compounds) (Valine)

VOLSHTEYN, L.M.; MOTYAGINA, G.G.

Interconversions of tetra-, tri-, and diglycine complexes  
of bivalent platinum. Zhur.neorg.khim. 7 no.11:2495-2500  
N '62. (MIRA 15:12)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut  
imeni Dzerzhinskogo.

(Platinum compounds)  
(Glycine)

VOLSHTEYN, L.M.

Boris Vladimirovich Ptitsyn; on his 60th birthday. Zhur.ob.khin.  
33 no.3:717-719 Mr '63. (MIRA 16:3)  
(Ptitsyn, Boris Vladimirovich, 1903-)

VOLSHTEYN, L.M.; VOLODINA, I.O.

Tetraalanine complexes of bivalent platinum. Zhur.neorg.khim.  
7 no.2:252-257 F '62. (MIRA 15:3)

1. Dnepropetrovskiy khimiko-tekhnologicheskoy institut imeni  
Dzerzhinskogo.

(Platinum compounds) (Alanine)

VOLSHTEYN, I.M.; MOGILEVKINA, M.F.; MOTYAGINA, G.G.

Conversion of cis-diglycineplatinum into a trans isomer. Zhur.  
neorg.khim. 6 no.5:1105-1109 My '61. (MIRA 14:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut imeni  
F.E.Dzerzhinskogo.

(Platinum compounds)



VOISHTYEN, L.M.; MOGILEVKINA, M.F.

Inner complex compounds of bivalent platinum with methionine.  
Dokl. AN SSSR 142 no.6:1305-1307 F '62. (MIRA 15:2)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut im.  
F.E.Dzerzhinskogo. Predstavleno akademikom A.A.Grinbergom.  
(Platinum compounds)  
(Methionine)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.; VELIKANOV, M.S.

New compounds of bivalent platinum with amino acids. Trudy  
DKHTI no.6:3-11 '58 (MIRA 13:11)  
(Platinum compounds) (Amino acids)

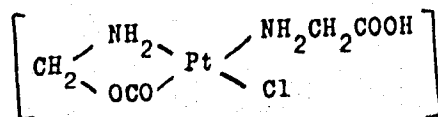
S/078/60/005/009/022/040/XX  
B017/B058

AUTHORS: Volshiteyn, L. M. and Volodina, I. O.

TITLE: Complex Compounds of Bivalent Platinum With Glycocoll

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9,  
pp. 1948 - 1953

TEXT: The action of HCl on cis- $[\text{Pt}(\text{NH}_2\text{CH}_2\text{CO}_2\text{H})_2]$  proceeds gradually. Splitting of the glycocoll ring under the formation of  $[\text{PtGl}(\text{GlH})\text{Cl}]$  (Gl = glycocoll radical) occurs in the first stage. This compound reacts further with HCl under the formation of  $[\text{Pt}(\text{GlH})_2\text{Cl}_2]$ . The compound



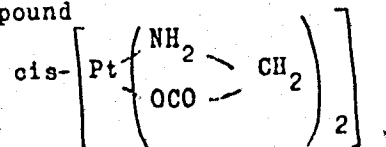
was synthesized with a yield of approximately 70%. Ammonia splits the

Card 1/3

Complex Compounds of Bivalent  
Platinum With Glycocoll

S/078/60/005/009/022/040/XX  
B017/B058

glycocoll ring of the compound



and a  $\text{NH}_3$  group takes the place of the carboxyl group. The preparation of  $[\text{PtGl}_2(\text{NH}_3)_2]$  is described in detail. This compound crystallizes prismatically, and is dissolved in water at  $25^\circ\text{C}$  up to about 1.7%. It is a non-electrolyte. It can easily be solved in acid under the formation of an electrolyte of the form  $[\text{Pt}(\text{GlH})_2(\text{NH}_3)_2]\text{X}_2$ , and by neutralization with alkali liquors it can be retransformed into the non-electrolyte  $[\text{PtGl}_2(\text{NH}_3)_2]$ . An attempt to prepare pure  $[\text{PtGl}_2\text{NH}_3]$  with only one split glycocoll ring failed. There are 1 figure, 1 table, and 2 Soviet references.

Card 2/3